

## **REMARKS**

In the Office Action ("OA") mailed June 17, 2004, the Examiner objected to the drawings because reference number "S305" generates random number "R1" when it should be "R2". Accordingly, Applicants amends Figs. 21 and 22, as suggested by the Examiner.

The Examiner rejected claims 1-9 under 35 U.S.C. §102(e) as anticipated by U.S. Patent No. 6,289,102 to Ueda et al. In view of the following remarks, Applicants respectfully traverse the Examiner's rejection of the claims under 35 U.S.C. § 102(e).

### **I. Objection to the Drawings**

The objection to the Drawings is addressed by the amendment of Figs. 21 and 22. Accordingly, Applicants request withdrawal of the objection to the Drawings.

### **II. Response to Rejection Under 35 U.S.C. § 102(e)**

The Examiner rejected claims 1-9 under 35 U.S.C. §102(e) as anticipated by U.S. Patent No. 6,289,102 to Ueda. In order to properly anticipate Applicant's claimed invention under 35 U.S.C. § 102, each and every element of the claim in issue must be found, either expressly described or under principles of inherency, in a single prior art reference. Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in...the claim." See M.P.E.P. § 2131 (8<sup>th</sup> Ed., Aug. 2001), quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989). Finally, "[t]he elements must be arranged as required by the claim." M.P.E.P. § 2131 (8<sup>th</sup> ed., 2001), p. 2100-69.

Applicant begins with a discussion of claim 1. Claim 1, as amended, now recites:

a mutual authentication method for use between a recording apparatus which records copied contents on a removable recording

medium having an arithmetic processing function, and the removable recording medium, said method comprising the steps of:

storing in the removable recording medium at least first information which depends on the removable recording medium, and second information which is to be shared by the recording apparatus in executing mutual authentication with the recording apparatus and depends on the removable recording medium; and generating by the recording apparatus authentication information used in mutual authentication with the removable recording medium on the basis of only the first information obtained from the removable recording medium, and executing mutual authentication between the recording apparatus and the removable recording medium using the generated authentication information and the second information, wherein executing the mutual authentication includes the steps of

generating a random number in the recording apparatus and transferring the random number to the removable recording medium,

generating a first function in the recording apparatus using the generated authentication information and the generated random number,

generating a second function in the removable recording medium using the generated second information and the transferred random number, and transferring the second function to the recording apparatus, and

comparing the generated first function with the generated second function in the recording apparatus.

Applicants respectfully submit that Ueda does not disclose or suggest the combination of steps recited in amended claim 1. For example, Ueda does not provide a teaching of at least the utilization of "a removable recording medium." The Examiner has taken a position that Ueda's optical disk drive (Fig. 14 element 509) serves as the recording medium (OA, pg. 4 lines 1-2 and 5-7). Ueda's optical disk drive having an optical disk (Fig. 15 element 607) is fixedly connected to SCSI bus of the information reproducing device (Fig. 14 element 500). Such an optical disk drive or optical disk therein does not constitute a teaching of "removable recording medium" as recited in claim 1.

Furthermore, Ueda's authentication method differs from the mutual authentication as recited in claim 1. Ueda fails to disclose "storing in the removable recording medium at least first information which depends on the removable recording medium, and second information which is to be shared by the recording apparatus in executing mutual authentication with the recording apparatus and depends on the removable recording medium," as recited in claim 1. Applicants note that each of the "authentication key k" and the "random number R1" in Ueda is not the information depending on the recording medium.

Moreover, Ueda fails to disclose "generating by the recording apparatus authentication information used in mutual authentication with the removable recording medium on the basis of only the first information obtained from the removable recording medium, and executing mutual authentication between the recording apparatus and the removable recording medium using the generated authentication information and the second information," as recited in claim 1. According to another aspect of Ueda, the AV decoder may generate authentication information  $f_i(R1)$  ( $= f_k(R1)$ ) using a random number R1 transmitted from the optical disk drive and transmit it to the optical disk drive, while the optical disk drive may execute authentication with the AV decoder using the authentication information  $f_i(R1)$  and authentication key k. In this case, however, Applicants note that the "random number R1" in Ueda is not the information depending on the recording medium, and the mutual authentication as claimed in claim 1 is not executed although one-way authentication using the authentication information  $f_i(R1)$  may be executed.

Since Ueda fails to teach the elements of claim 1, Applicants submit that claim 1 is not anticipated by Ueda. For at least the foregoing reasons, Applicant submits that claim 1 is allowable over Ueda and request withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(e). Because claims 3, 5, 7, and 9 are independent claims with limitations similar to those of claim 1, Applicant further submits that claims 3, 5, 7, and 9 are also allowable over Ueda for at least the reasons given with respect to claim 1.

Moreover, Applicant submits that claims 2, 4, 6, and 8, and new claims 10-14 are allowable, not only for the reasons stated above with regard to their respective allowable base claims, but also for their own additional features that distinguish them from the cited references. Accordingly, Applicant requests withdrawal of the rejection of claims 2, 4, 6, and 8 under 35 U.S.C. § 102(e) and the timely allowance of these pending claims and new claims 10-14.

**Conclusion**

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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By: 

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Attachments: Replacement Sheets - Figs. 21 and 22  
Annotated Sheets showing changes